



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

VIA ELECTRONIC MAIL
DELIVERY RECEIPT REQUESTED

Mike Mee, HSE Manager
Citgo Petroleum Corporation
mmee@citgo.com

Re: Finding of Violation
Citgo Petroleum Corporation
Lemont, Illinois

Dear Mr. Mee,

The U.S. Environmental Protection Agency is issuing the enclosed Finding of Violation (FOV) to Citgo Petroleum Corporation (Citgo or you) under Section 113(a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(3). We find that you have violated the following requirements at your Lemont, Illinois facility: National Emission Standard for Benzene Waste Operations, codified at 40 C.F.R. Part 61, Subpart FF, New Source Performance Standards for Volatile Organic Compounds from Petroleum Refinery Wastewater Systems, codified at 40 C.F.R. Part 60, Subpart QQQ, and your Title V operating permit.

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us, either virtually or in-person, about the violations alleged in the FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the FOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Constantinos Loukeris. You may call him at (312) 353-6198 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

Sarah G. Marshall
Supervisor, Air Enforcement and Compliance Assurance Section (MI/WI)

Enclosure

cc: Kent Mohr, Manager, IEPA
Kent.Mohr@illinois.gov

2. 40 C.F.R. § 61.05(c) requires that ninety days after the effective date of any standard, no owner or operator shall operate any existing source subject to that standard in violation of the standard, except under a waiver granted by the Administrator under this part or under an exemption granted by the President under section 112(c)(2) of the CAA.
3. 40 C.F.R. § 61.12(a) provides that compliance with numerical emission limits shall be determined in accordance with emission tests established in 40 C.F.R. § 61.13 or as otherwise specified in an individual subpart.
4. 40 C.F.R. § 61.12(b) provides that compliance with design, equipment, work practice or operational standards shall be determined as specified in an individual subpart.
5. 40 C.F.R. § 61.12(c) requires that the owner or operator of each stationary source shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the source.

Benzene Waste NESHAP

6. Under Section 112(d) of the CAA, 42 U.S.C. § 7412(d), EPA promulgated the Benzene Waste NESHAP on March 7, 1990. *See 55 Fed. Reg.* 8346.
7. The Benzene Waste NESHAP, as amended pursuant to Section 112(q) of the CAA, became effective on January 7, 1993, and is codified at 40 C.F.R. Part 61, Subpart FF.
8. 40 C.F.R. § 61.340(a) states that the provisions of this subpart apply to owners and operators of chemical manufacturing plants, coke by-product recovery plants, and petroleum refineries.
9. 40 C.F.R. § 61.342(b) states that each owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Megagrams per year (Mg/yr) or 11 ton/yr as determined in paragraph (a) of this section shall be in compliance with the requirements of paragraphs (c) through (h) of this section no later than 90 days following the effective date, unless a waiver of compliance has been obtained under 40 C.F.R. § 61.11, or by the initial startup for a new source with an initial startup after the effective date.
10. 40 C.F.R. § 61.341 defines “cover” as “a device or system which is placed on or over a waste placed in a waste management unit so that the entire waste surface area is enclosed and sealed to minimize air emissions. A cover may have openings necessary for operation, inspection, and maintenance of the waste management unit such as access hatches, sampling ports, and gauge wells provided that each opening is closed and sealed when not in use. Example of covers include a fixed roof installed on a tank, a lid installed on a container, and an air-supported enclosure installed over a waste management unit.”
11. 40 C.F.R. § 61.341 defines “fixed roof” as “a cover that is mounted on a waste management unit in a stationary manner and that does not move with fluctuations in liquid level.”
12. 40 C.F.R. § 61.341 defines “individual drain system” as “the system used to convey waste from a process unit, product storage tank, or waste management unit to a waste management unit. The term includes all process drains and common junction boxes, together with their associated sewer lines and other junction boxes, down to the receiving waste management unit.”
13. 40 C.F.R. § 61.341 defines “no detectable emissions” as “less than 500 parts per million by volume (ppmv) above background levels, as measured by a detection instrument reading in accordance with the procedures specified in § 61.355(h) of this subpart.”
14. 40 C.F.R. § 61.341 defines “oil-water separator” as “a waste management unit, generally a tank or surface impoundment, used to separate oil from water. An oil-water separator consists of not only the separation unit but also the forebay and other separator basins, skimmers, weirs, grit chambers, sludge hoppers, and bar screens that are located directly after the individual drain system and prior to additional treatment units such as an air flotation unit, clarifier, or biological treatment unit. Examples of an oil-water separator include an API separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment.”
15. 40 C.F.R. § 61.341 defines “tank” as “a stationary waste management unit that is designed to contain an accumulation of waste and is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.”

16. 40 C.F.R. § 61.341 defines “waste management unit” as “a piece of equipment, structure, or transport mechanism used in handling, storage, treatment, or disposal of waste. Examples of a waste management unit include a tank, surface impoundment, container, oil-water separator, individual drain system . . .”
17. 40 C.F.R. § 61.342(c)(1)(ii) states that for each waste stream that contains benzene, including but not limited to, organic waste streams that contain less than 10 percent water and aqueous waste streams, even if the wastes are not discharged to an individual drain system, the owner or operator shall comply with the standards specified in 40 C.F.R. §§ 61.343 through 61.347 of this subpart for each waste management unit that receives or manages the waste stream prior to and during treatment of the waste stream in accordance with paragraph (c)(1)(i) of this section.
18. 40 C.F.R. § 61.342(c)(1)(iii) states that each waste management unit used to manage or treat waste streams that will be recycled to a process shall comply with the standards specified in 40 C.F.R. §§ 61.343 through 61.347. Once the waste stream is recycled to a process, including to a tank used for the storage of production process feed, product, or product intermediates, unless this tank is used primarily for the storage of wastes, the material is no longer subject to paragraph (c) of this section.
19. 40 C.F.R. § 61.342(e)(2)(i) states that the benzene quantity for the wastes described in paragraph (e)(2) of this section must be equal to or less than 6.0 Mg/yr (6.6 ton/yr), as determined in 40 C.F.R. § 61.355(k). Wastes as described in paragraph (e)(2) of this section that are transferred offsite shall be included in the determination of benzene quantity as provided in 40 C.F.R. § 61.355(k). The provisions of paragraph (f) of this section shall not apply to any owner or operator who elects to comply with the provisions of paragraph (e) of this section.
20. 40 C.F.R. § 61.343(a) states that except as provided in paragraph (b) of this section and in 40 C.F.R. § 61.351, the owner or operator must meet the standards in paragraph (a)(1) or (2) of this section for each tank in which the waste stream is placed in accordance with 40 C.F.R. § 61.342 (c)(1)(ii). The standards in this section apply to the treatment and storage of the waste stream in a tank, including dewatering.
21. 40 C.F.R. § 61.343(a)(1) states that the owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device.
22. 40 C.F.R. § 61.343(a)(1)(i)(A) states, that for fixed-roof tanks, the cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 parts per million by volume (ppmv) above background, as determined initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h) of this subpart.
23. 40 C.F.R. § 61.343(b)(3) states that for each tank complying with paragraph (b) of this section, one or more devices which vent directly to the atmosphere may be used on the tank provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the tank or cover resulting from filling or emptying the tank, diurnal temperature changes, atmospheric pressure

changes or malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.

24. 40 C.F.R. § 61.344(a)(1) states that the owner or operator shall meet the following standard for each surface impoundment in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The owner or operator shall install, operate, and maintain on each surface impoundment a cover (e.g., air-supported structure or rigid cover) and closed-vent system that routes all organic vapors vented from the surface impoundment to a control device.
25. 40 C.F.R. § 61.344(a)(1)(i)(A) states that the cover and all openings on each surface impoundment (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h) of this subpart.
26. 40 C.F.R. § 61.344(a)(1)(i)(B) states that each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the surface impoundment except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.
27. 40 C.F.R. § 61.346(a)(1) states that except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The owner or operator shall install, operate, and maintain on each drain system opening a cover and closed-vent system that routes all organic vapors vented from the drain system to a control device.
28. 40 C.F.R. § 61.346(a)(1)(i)(A) states that except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The cover and all openings (e.g., access hatches, sampling ports) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h) of this subpart.
29. 40 C.F.R. § 61.346(a)(1)(i)(B) states that except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the drain system except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.
30. 40 C.F.R. § 61.347(a)(1) states that except as provided in 40 C.F.R. § 61.352 of this subpart, the owner or operator shall meet the following standards for each oil-water separator in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the oil-water separator to a control device.
31. 40 C.F.R. § 61.347(a)(1)(i)(A) states that except as provided in 40 C.F.R. § 61.352 of this subpart, the owner or operator shall meet the following standards for each oil-water separator in

which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h) of this subpart.

32. 40 C.F.R. § 61.350(a) states that delay of repair of facilities or units that are subject to the provisions of this subpart will be allowed if the repair is technically impossible without a complete or partial facility or unit shutdown.
33. 40 C.F.R. § 61.355(h)(1) states that an owner or operator shall test equipment for compliance with no detectable emissions as required in 40 C.F.R. §§ 61.343 through 61.347, and 40 C.F.R. § 61.349 of this subpart in accordance with the following requirements: Monitoring shall comply with Method 21 from appendix A of 40 C.F.R. part 60.
34. 40 C.F.R. § 61.355(k) requires that “[a]n owner or operator shall determine the benzene quantity for the purposes of the calculation required by 40 C.F.R. § 61.342(e)(2) by the following procedure: (1) For each waste stream that is not controlled for air emissions in accordance with 40 C.F.R. §§ 61.343, 61.344, 61.345, 61.346, 61.347, or 61.348(a), as applicable to the waste management unit that manages the waste, the benzene quantity shall be determined as specified in paragraph (a) of this section, except that paragraph (b)(4) of this section shall not apply, i.e., the waste quantity for process unit turnaround waste is not annualized but shall be included in the determination of benzene quantity for the year in which the waste is generated for the purposes of the calculation required by 40 C.F.R. § 61.342(e)(2).”
35. 40 C.F.R. § 61.356(d) states that an owner or operator using control equipment in accordance with 40 C.F.R. §§ 61.343 through 61.347 shall maintain engineering design documentation for all control equipment that is installed on the waste management unit. The documentation shall be retained for the life of the control equipment. If a control device is used, then the owner or operator shall maintain the control device records required by paragraph (f) of this section.

NSPS General Provisions

36. Section 111 of the CAA, 42 U.S.C. § 7411, authorizes EPA to promulgate regulations establishing New Source Performance Standards (NSPS).
37. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), states that after the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.

Subpart QQQ

38. EPA promulgated Subpart QQQ on November 23, 1988. 53 *Fed. Reg.* 47623
39. 40 C.F.R. § 60.690(a) states that the provisions of this subpart apply to affected facilities located in petroleum refineries for which construction, modification, reconstruction is commenced after May 4, 1987.

- 40. 40 C.F.R. § 60.692-2(a)(1) states that each drain shall be equipped with water seal controls.
- 41. 40 C.F.R. § 60.692-2(a)(2) states that each drain in active service shall be checked by visual or physical inspection initially and monthly thereafter for indications of low water levels or other conditions that would reduce the effectiveness of the water seal controls.
- 42. 40 C.F.R. § 60.692-2(a)(5) states that whenever low water levels or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practicable, but not later than 24 hours after detection, except as provided in 40 C.F.R. § 60.692-6.
- 43. 40 C.F.R. § 60.692-2(b)(1) states that junction boxes shall be equipped with a cover and may have an open vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter.
- 44. 40 C.F.R. § 60.692-2(b)(2) states that junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.
- 45. 40 C.F.R. § 60.692-2(b)(3) states that junction boxes shall be visually inspected initially and semiannually thereafter to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge.
- 46. 40 C.F.R. § 60.692-2(b)(4) states that if a broken seal or gap is identified, first effort at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is identified, except as provided in 40 C.F.R. § 60.692-6.
- 47. 40 C.F.R. § 60.692-2(c)(1) states that sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.
- 48. 40 C.F.R. § 60.692-2(c)(2) states that the portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions.
- 49. 40 C.F.R. § 60.692-2(c)(3) states that whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in 40 C.F.R. § 60.692-6.

Title V

- 50. Pursuant to Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), it is unlawful for any person to, among other things, operate a major source subject to Title V except in compliance with a Title V operating permit after the effective date of any permit program approved or promulgated under Title V of the CAA. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. *See 57 Fed. Reg.* 32295; 40 C.F.R. Part 70. EPA promulgated regulations governing the federal operating permit program on July 1, 1996. *See 61 Fed. Reg.* 34228; 40 C.F.R. Part 70.

51. EPA granted final full approval to the Illinois Title V operating permit program on December 4, 2001. 66 Fed. Reg. 62946. The program became effective on November 30, 2001. See 40 C.F.R. Part 70, Appendix A. The Title V permits that Illinois EPA issues under its program are also known as CAAPP permits.
52. On January 9, 2006, the State of Illinois issued a Title V Permit to Citgo for its Lemont refinery.
53. On December 17, 2008, the State of Illinois reissued the Title V Permit to Citgo for its Lemont refinery making an administrative amendment.
54. Subpart FF and Subpart QQQ are incorporated into Citgo's Title V operating permit as applicable requirements.
55. Condition 7.9.3 of Citgo's Title V operating permit, states that Citgo shall comply with the applicable provisions of Subpart QQQ for the individual drain systems and junction boxes in the process units listed in this condition.
56. Condition 5.3.16 of Citgo's Title V operating permit states that Citgo shall comply with the requirements of 40 CFR 61 Subpart FF because the source is a petroleum refinery with a total annual benzene quantity in its waste streams in excess of 10 megagrams per year. Citgo has chosen to comply with 40 CFR 61.342(e)(2) which states that the benzene quantity for the wastes described below shall not exceed 6 megagrams per year.

Factual Background

57. Citgo owns and operates a petroleum refinery at 135th Street and New Avenue, Lemont, Illinois 60439.
58. Citgo's Lemont, Illinois refinery ("Refinery") is subject to requirements at Subpart FF.
59. The Refinery is a facility with a total annual benzene quantity of greater than 10 Mg/yr since at least 2001.
60. The Refinery is subject to the requirements at Subpart QQQ.
61. Citgo operates individual drain systems and associated junction boxes and oil-water separators at the Refinery that have been constructed, modified, or reconstructed after May 4, 1987.
62. EPA conducted an on-site Subpart FF and Subpart QQQ inspection on September 13-15, 2021 (September 2021 Inspection) at the Refinery.
63. Citgo reported the following total annual benzene quantity controlled and uncontrolled in Mg/yr for the listed calendar years:
 - a. 2020: Controlled – 336.18, Uncontrolled – 0.91
 - b. 2019: Controlled – 374.92, Uncontrolled – 1.27
64. The table below summarizes the various leaks, including detectable emissions, that EPA discovered using Method 21 during its September 2021 Inspection:

Component ID	Equipment Type	EPA's Reading (ppm)	Citgo's Reading (ppm)	Additional Notes
119HQ115	Drain	825	660	Sight Glass Blowdown to Drain
By D401 in Sulfur Recovery Unit	Stormwater Drain (Grate)	64	-	Citgo did not identify as Subpart QQQ applicable, sludge liquid on top of drain
102WWML-26	Manhole	25,000	545	-
102WWML-23	Manhole	>10,000	14,000	-
103WWML-19	Manhole	21,000	22,000	
WW590-8	Cover	1,640	924	
WW 113-3	Manhole	1,340	779	2 bolts missing on manhole cover
119HQ31	Cleanout	1,200	2,160	Cracked cover with missing metal seal.
119WWML-8	Manhole	80,000	15,859	Emissions from all around the manhole
102WWML-22	Manhole	20,000	31,000	Open hole on manhole cover
112WWML-3	Manhole	900	1,221	Caulk on sample port in middle of manhole cover cracked and dry
111WWML-13	Manhole	1,180	8,300	Multiple cracks in concrete around the manhole
119WWML-11	Manhole	3,900	16,107	Manhole cover has opening with no bolt/patch
North of 119G- 2B	Stormwater Drain (Grate)	21.7	Confirmed	Citgo did not identify as Subpart QQQ
South of D3 in 119 Process Unit	Stormwater Drain (Grate)	38	28	-
Tag# 844-SPSO LL 00049	South Plant Effluent Sump (PSO Sump) Cover	-	12,240	-
844G-444B	Drain	-	3,000	-
844SPSO LL00018	Hatch/Cover	-	30,000	-
Tag# 401247	PSO Sump Cover	-	12,079	-
Tag#401249	PSO Sump Cover	-	14,000	-
Tag#401243	PSO Sump Cover	-	9,600	-

65. The table below summarizes the visual observations of Subpart QQQ violations that EPA discovered during its September 2021 Inspection:

Component ID	Process Unit	Equipment Type	Observation
W111-3	Crude Unit	Manhole	Debris and hose on top of manhole
111HQ25	Crude Unit	Drain	Dry, no water seal
111HQ57	Crude Unit	Drain	Dry, no water seal
111HQ51	Crude Unit	Drain	Water seal appeared oily
111HQ32	Crude Unit	Drain	Drain appears wet on the sides, but no water seal
111HQ28	Crude Unit	Drain	Level is quite high and appeared oily
WWML-13	Crude Unit	Manhole	Multiple cracks in concrete next to manhole cover
119ML-11	Sulfur Recovery Unit	Manhole	Opening on the cover, and also minimal debris on top
119HQ8	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ5	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ15	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ16	Sulfur Recovery Unit	Drain	Dry, no water seal, sulfur odor present
119HQ18	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ11	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ20	Sulfur Recovery Unit	Drain	Drain appears wet on the sides, but no water seal
119HQ22	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ32	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ36	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ40	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ47	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ45	Sulfur Recovery Unit	Drain	Dry, no water seal, debris was present in the drain hub
119HQ46	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ51	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ59	Sulfur Recovery Unit	Drain	Water seal appeared oily
119HQ60	Sulfur Recovery Unit	Drain	Water seal appeared oily
119HQ61	Sulfur Recovery Unit	Drain	Water seal appeared oily
119HQ63	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ64	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ70	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ72	Sulfur Recovery Unit	Drain	Dry, no water seal

119HQ73	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ116	Sulfur Recovery Unit	Drain	Water seal appeared oily
119HQ121	Sulfur Recovery Unit	Drain	Dry, no water seal, debris was present in the drain hub
119HQ120	Sulfur Recovery Unit	Drain	Dry, no water seal, debris was present in the drain hub
119HQ135	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ130	Sulfur Recovery Unit	Drain	Dry, no water seal, debris was present in the drain hub
119HQ148	Sulfur Recovery Unit	Drain	Dry, no water seal
119HQ147	Sulfur Recovery Unit	Drain	Dry, no water seal
Near 119F36	Sulfur Recovery Unit	Drain	Dry, no water seal, insulation was present in the drain hub
102HQ39	Gasoline Hydrotreater	Drain	Dry, no water seal, debris was present in the drain hub
102HQ42	Gasoline Hydrotreater	Drain	Dry, no water seal, debris was present in the drain hub
102HQ40	Gasoline Hydrotreater	Drain	Dry, no water seal, water bottle in drain
102HQ43	Gasoline Hydrotreater	Drain	Dry, no water seal
102HQ41	Gasoline Hydrotreater	Drain	Debris on the upper level of the drain, with a water seal below
102HQ22	Gasoline Hydrotreater	Drain	Dry, no water seal, water bottle in drain
102HQ25	Gasoline Hydrotreater	Drain	Dry, no water seal, tube in drain
102HQ5	Gasoline Hydrotreater	Drain	Dry, no water seal, debris was plugging the drain hub
102WWML22	Gasoline Hydrotreater	Manhole	Manhole had an open hole in it
102WWML20	Gasoline Hydrotreater	Manhole	Manhole had a cracked concrete seam
102HQ3	Gasoline Hydrotreater	Drain	Dry, no water seal, debris was plugging the drain hub
102HQ1	Gasoline Hydrotreater	Drain	Dry, no water seal, debris was present in the drain hub
102ML23	Gasoline Hydrotreater	Manhole	Manhole was half covered in dirt and

			rocks; seal visibly broken on cover
103ML19	Naphtha Hydrotreater	Manhole	Manhole almost entirely covered under dirt
590HQ33	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ56	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ52	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, cobwebs were present
590HQ41	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, cobwebs were present
590HQ37	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ35	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ45	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was plugging in the drain hub
590HQ05	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ06	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ44	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ08	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ09	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ32	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ23	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ60	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ61	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ17	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ53	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ22	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ55	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ39	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ49	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal

590HQ58	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ48	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal
590HQ11	Ultra-Low Sulfur Diesel	Drain	Water seal present; however, spray paint can in drain
590HQ47	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
590HQ02	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, and buried under almost 1 foot of dirt. Citgo indicated was cleaned out a few years ago.
590HQ62	Ultra-Low Sulfur Diesel	Drain	Dry, no water seal, debris was present in the drain hub
103HQ12	Naphtha Hydrotreater	Drain	High level present in drain
103HQ04	Naphtha Hydrotreater	Drain	Dry, no water seal
103HQ11	Naphtha Hydrotreater	Drain	Dry, no water seal
103HQ10	Naphtha Hydrotreater	Drain	Dry, no water seal, debris was present in the drain hub
103HQ07	Naphtha Hydrotreater	Drain	Dry, no water seal
103HQ03	Naphtha Hydrotreater	Drain	Dry, no water seal
103HQ02	Naphtha Hydrotreater	Drain	Dry, no water seal
113HQ22	Coker Unit	Drain	Dry, no water seal
113HQ25	Coker Unit	Drain	Dry, no water seal
113CQ29	Coker Unit	Cleanout	Located under a trailer
WW113-1	Coker Unit	Manhole	Center hold of manhole cover with pipe running through it to backflush/segregate sewer.
HQ01	Purge Treatment Unit	Drain	Dry, no water seal, filled with dirt to the top of hub
113HQ61	Coker Unit	Drain	Dry, no water seal, debris was present in the drain hub
113HQ26	Coker Unit	Drain	Dry, no water seal, debris was present in the drain hub
113 CQ31	Coker Unit	Drain	Cleanout drain dry with debris present and not sealed.

112HQ15	FCCU	Drain	Dry, no water seal
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66. In the 4th quarter 2020 Subpart FF report submitted by Citgo on January 15, 2021, Citgo identified 32 instances of detectable emissions above 500 ppm from 8 components as follows:
 - a. 2 closed-vent systems (CVS) – 13 times
 - b. 1 connector
 - c. 1 hatch
 - d. 2 pumps
 - e. 2 valves
67. In the 3rd quarter 2020 Subpart FF report submitted by Citgo on October 21, 2020, Citgo identified 30 instances of detectable emissions above 500 ppm from 7 components as follows:
 - a. 3 CVS – 12 times
 - b. 1 pump
 - c. 3 valves
68. In the 2nd quarter 2020 Subpart FF report submitted by Citgo on July 15, 2020, Citgo identified 24 instances of detectable emissions above 500 ppm from 4 components as follows:
 - a. 2 CVS – 11 times
 - b. 1 pump
 - c. 1 valve
69. In the 1st quarter 2020 Subpart FF report submitted by Citgo on April 21, 2020, Citgo identified 38 instances of detectable emissions above 500 ppm from 10 components as follows:
 - a. 2 CVS – 14 times
 - b. 3 connectors
 - c. 1 hatch
 - d. 1 pump
 - e. 3 valves
70. In the 4th quarter 2019 Subpart FF report submitted by Citgo on January 20, 2020, Citgo identified 35 instances of detectable emissions above 500 ppm from 9 components as follows:
 - a. 2 CVS – 13 times
 - b. 3 connectors
 - c. 1 hatch
 - d. 1 relief
 - e. 2 valves
71. In the 3rd quarter 2019 Subpart FF report submitted by Citgo on October 14, 2019, Citgo identified 44 instances of detectable emissions above 500 ppm from 16 components as follows:
 - a. 2 CVS – 13 times
 - b. 1 pump
 - c. 3 valves

- d. 8 hatches
 - e. 2 connectors
72. In the 2nd quarter 2019 Subpart FF report submitted by Citgo on July 17, 2019, Citgo identified 33 instances of detectable emissions above 500 ppm from 9 components as follows:
- a. 2 CVS – 13 times
 - b. 2 connectors
 - c. 5 valves
73. In the 1st quarter 2019 Subpart FF report submitted by Citgo on April 25, 2019, Citgo identified 42 instances of detectable emissions above 500 ppm from 18 components as follows:
- a. 2 CVS – 12 times
 - b. 4 connectors
 - c. 2 hatches
 - d. 10 valves
74. In the 1st half 2020 Subpart QQQ report submitted by Citgo on August 26, 2020, Citgo identified the following:
- a. 0 process drains that had a water seal dry
 - b. 8 process drains/sewer lines with cracks, gaps, or other issues found
 - c. 13 junction boxes with a cover but not sealed
 - d. 10 junction boxes with a sample port in the cover not sealed
 - e. 2 junction boxes with other issues found
75. In the 2nd half 2020 Subpart QQQ report submitted by Citgo on February 25, 2021, Citgo identified the following:
- a. 0 process drains that had a water seal dry
 - b. 9 process drains/sewer lines with cracks, gaps, or other issues found
 - c. 27 junction boxes with a cover but not sealed
 - d. 1 junction boxes with a sample port in the cover not sealed
 - e. 2 junction boxes with other issues found
76. In the 1st half 2019 Subpart QQQ report submitted by Citgo on August 28, 2019, Citgo identified the following:
- a. 0 process drains that had a water seal dry
 - b. 1 process drain with a water seal breach
 - c. 4 process drains/sewer lines with cracks, gaps, or other issues found
 - d. 18 junction boxes with a cover but not sealed
 - e. 7 junction boxes with a sample port in the cover not sealed
 - f. 6 junction boxes with other issues found
 - g. 4 junction boxes with bolt holes not sealed
77. In the 2nd half 2019 Subpart QQQ report submitted by Citgo on February 25, 2020, Citgo identified the following:

- a. 0 process drains that had a water seal dry
 - b. 17 process drains/sewer lines with cracks, gaps, or other issues found
 - c. 26 junction boxes with a cover but not sealed
 - d. 13 junction boxes with a sample port in the cover not sealed
78. During the September 2021 Inspection, EPA requested all engineering design documentation for its Subpart FF control equipment and was only provided a PSO Sump design document.

Violations

Benzene Waste NESHAP Violations

79. Based on the detectable emissions identified by EPA during EPA's September 2021 Inspection (Paragraph 64) and by Citgo in its Subpart FF and Subpart QQQ reports for calendar years 2019 and 2020 (Paragraphs 66 – 77), Citgo failed to design to operate all covers and openings, closed-vent systems, and other equipment (valves, pumps, and connectors) with no detectable emissions for waste management units including tanks, surface impoundments, individual drain system, and oil-water separators, as required by 40 C.F.R. §§ 61.343(a)(1)(i)(A), 61.344(a)(1)(i)(A), 61.344(a)(1)(i)(B), 61.346(a)(1)(i)(A), 61.346(a)(1)(i)(B) and 61.347(a)(1)(i)(A) and its Title V operating permit.
80. Citgo failed to create or maintain engineering design documentation when using control equipment in accordance with 40 C.F.R. §§ 61.343 through 61.347 that is installed on the waste management unit as required by 40 C.F.R. § 61.356(d) and its Title V operating permit.
81. Based on the leaks identified by EPA during the September 2021 Inspection (Paragraph 64), Citgo failed to ensure that the covers and all openings were designed to operate with no detectable emissions for the following waste management units: tanks, surface impoundments, individual drain system, and oil-water separators, as required by 40 C.F.R. §§ 61.343(a)(1)(i)(A), 61.344(a)(1)(i)(A), 61.344(a)(1)(i)(B), 61.346(a)(1)(i)(A), 61.346(a)(1)(i)(B) and 61.347(a)(1)(i)(A) and its Title V operating permit.
82. Based on detectable emissions identified during the September 2021 Inspection (Paragraph 64) and detectable emissions identified by Citgo (Paragraphs 66 – 73), for at least the period of 2019 through the 2021, for each waste management unit of the controlled sewer system and associated closed-vent system, Citgo failed to comply with the 6 Mg/yr control option as required by 40 C.F.R. § 61.342(e) and 61.342(e)(2)(i) and its Title V operating permit.
83. By not designing and/or operating each waste management unit to no detectable emissions, Citgo failed to route all emissions to a closed-vent system as required by 40 C.F.R. §§ 61.343(a)(1), 61.344(a)(1), 61.346(a)(1), and 61.347(a)(1) and its Title V operating permit.
84. By identifying leaks above the no detectable emissions standard for waste management units and not calculating a quantity of uncontrolled benzene for those leaks, Citgo failed to demonstrate compliance with the uncontrolled emissions level as required by 40 C.F.R. §§ 61.355(k) and 61.342(e)(2)(i) and its Title V operating permit.

NSPS Subpart OOO Violations

85. Citgo failed to maintain water seal controls on each drain within the process units identified in Paragraph 65 as required by 40 C.F.R. § 60.692-2(a)(1) and its Title V operating permit.
86. Citgo failed to maintain the junction boxes (including the manhole covers to the junction box) identified in Paragraphs 64 and 74-77 with a cover with a seal as required by 40 C.F.R. § 60.692-2(b)(2) and its Title V operating permit.
87. Citgo failed to maintain the sewer lines identified in Paragraphs 64 and 74-77 closed to the atmosphere and covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces as required by 40 C.F.R. § 60.692-2(c)(1) and its Title V operating permit.
88. Based on the number of visual inspection failures identified in Paragraph 65 (during EPA's September 2021 Inspection), Citgo failed to properly conduct monthly visual inspections as required by 40 C.F.R. § 60.692-2(a)(2), 60.692-2(b)(3), and 60.692-2(c)(2) and its Title V operating permit.
89. By not conducting the proper monthly visual inspections of the individual drain systems, junction boxes, and sewers, Citgo failed to make necessary and timely repairs as required by 40 C.F.R. § 60.692-2(a)(5), 60.692-2(b)(4), and 60.692-2(c)(3) and its Title V operating permit.

Environmental Impact of Violations

90. Violations of benzene standards increase the amount of benzene in the atmosphere. In acute (short-term) inhalation exposure of humans to benzene may cause drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation, and, at high levels, unconsciousness. Chronic (long-term) inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells and aplastic anemia, in occupational settings. Reproductive effects have been reported for women exposed by inhalation to high levels, and adverse effects on the developing fetus have been observed in animal tests. Increased incidences of leukemia (cancer of the tissues that form white blood cells) have been observed in humans occupationally exposed to benzene.
91. Violations of VOC standards increase the amount of a pollutant which has the ability to create photochemical smog under certain conditions.

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